

## **Remarks**

### **I. Summary of the Office Action**

In the Office Action mailed July 2, 2010, the Examiner objected to Claim 25 due to formalities. The Examiner also rejected Claims 18-19, 25-26, 30, 32-36, and 41-43 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 5,415,632 (Samson) in view of U.S. Publication No. 2004/0250864 (Zelson).

Further, the Examiner rejected Claims 20-21 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Samson and Zelson in view of U.S. Patent No. 5,025,829 (Edwards) and U.S. Publication No. 2003/0153869 (Ytteborg), Claims 27 and 38-40 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Samson and Zelson in view of Edwards, Claims 29 and 31 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Samson and Zelson in view of U.S. Patent No. 3,827,456 (Sheppard), and Claim 37 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Samson and Zelson in view of U.S. Patent No. 3,981,636 (Aoki).

### **II. Status of the Claims**

Presently pending are Claims 18-21, 25-27, and 29-43. Applicants herein amend Claims 18, 21, 25-27, 33, and 41-43. Applicants submit that no new matter has been added.

### **III. Summary of the Interview**

Applicants thank Examiner Bosworth for the telephonic interview held on October 26, 2010 ("the Interview") with Applicants' representative Nicole E. Reifman. Applicants appreciate the Examiner's time in discussing the present application. Participants in the meeting were Nicole E. Reifman and Examiner Bosworth.

During the Interview, the Samson and Zelson references were discussed with regard to the independent claims. Applicants and Examiner Bosworth discussed amendments to clarify Claims 18 and 41-43 and Examiner Bosworth indicated the proposed amendments would sufficiently clarify the claims.

The present amendments and remarks were drafted in accordance with the Interview.

#### **IV. Response to the Objection**

The Examiner objected to Claim 25 due to formalities. Specifically, the Examiner noted that the term “the circle” in Claim 25 lacked proper antecedent basis. With this Response, Applicants amend Claim 25 to recite “a circle.” Applicants submit that, in view of this amendment, the objection is moot and respectfully request removal of the objection.

#### **V. Response to the Rejections Under 35 U.S.C. § 103(a)**

The Examiner rejected Claims 18-19, 25-26, 30, 32-36, and 41-43 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 5,415,632 (Samson) in view of U.S. Publication No. 2004/0250864 (Zelson).

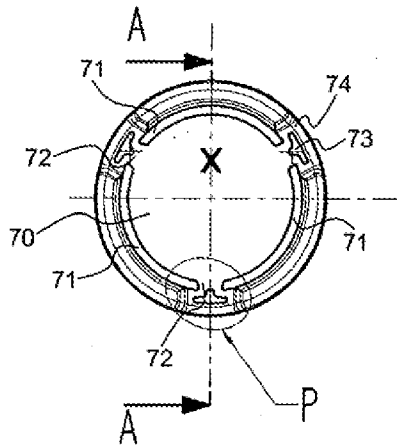
##### **a. The Cited References do not Disclose the Claimed Features**

Claim 18 as amended recites a valve body with a circular diaphragm comprising **narrow** elongate openings which are uniformly distributed adjacent the periphery of the diaphragm and are separated from one another by webs. In between the elongate openings are compact openings. Claims 41-43 recite similar features. The valve body configuration of narrow elongate openings and compact openings placed generally between the elongate ones is not shown in the cited art.

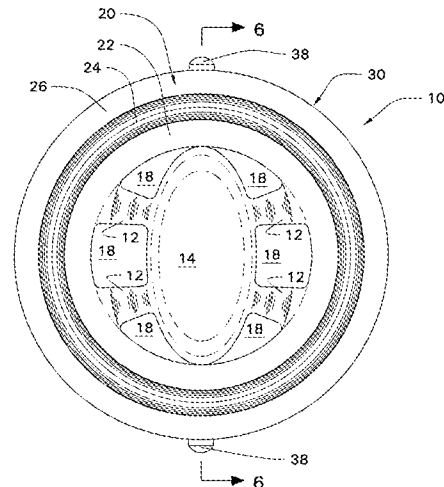
As the Examiner acknowledged, Samson does not teach narrow elongate openings and compact openings. In fact, Samson's valve body has only one opening, which is sealingly mounted on a pin.

The Examiner turned to Zelson for teaching the openings recited in Claims 18 and 41-43. However, Zelson does not teach **narrow** elongate openings and compact openings. The openings (18) the Examiner pointed to in Zelson as teaching the elongate openings are almost square-like in shape, and are definitely not **narrow** elongate openings.

To illustrate and highlight the different valve body opening configurations, the narrow elongate openings are items (71) in Fig. 5b, shown below. In contrast, the openings (18) in Zelson are shown below in Fig. 5. As can be seen in the Zelson figure, none of the openings (18) could be considered to be “narrow elongate openings.”



**Fig. 5b**



**FIG. 5**

#### **b. One of Ordinary Skill in the Art would not Combine Samson and Zelson**

In addition to Samson and Zelson lacking the features recited in Claims 18 and 41-43 as discussed above, one of ordinary skill in the art would not combine the valves of Samson and Zelson, because the valve in Samson has a different configuration and operates differently than the valve in Zelson.

Samson discloses a valve seat (16) with an opening (38) and a pin (39) that mates with a valve body (42). The valve body includes a single hole which is sealingly mounted on the pin. In Samson, when pressure is applied to the valve seat, a part of the peripheral edge of the valve body moves away from the valve seat, generating a passageway from the opening (38) of the valve seat to the outer edge of the valve body. If instead pressure is applied to the valve body, the valve body will be pressed against the valve seat, closing opening (38) even tighter.

Zelson's valve body comprises a mounting ring (30) with a groove (28). The valve body also has a central part called the “valve plug” (14), attached to the mounting ring (30) by hinges (12). The valve seat (32) is a plate with a central opening (34), and

the edges of the plate are contained within the groove of the valve body. The valve plug (14) of the valve body moves on its hinges to either open or close a flow path. Additionally, openings (18) are present in the valve plug to “provide a flow path for fluid around the valve plug 14 when the valve device 10 is in the open position.” (Par. [0066]).

Thus, it is the center portion (the valve plug) of the valve body in Zelson that moves, which is in direct contradiction with the Samson, which teaches the *periphery* of the valve body moving.

A functioning valve could not be achieved if one attempted to combine Samson and Zelson. The valve plug in Zelson that allows for movement and airflow in the center of the valve body would be in direct contradiction with Samson’s pin, which holds the valve body in place in the center of the valve body. Additionally, because the valve plug in Zelson is meant to be free to move in the center area of the valve body, the plug must be attached near the periphery of the valve body. However, in Samson it is the periphery of the valve body which moves. The valve plug in Zelson thus could not be attached to the periphery of the valve body in Samson.

For at least the reasons noted above, Applicants submit that there can be no *prima facie* obviousness in view of Samson and Zelson. Applicants thus submit that Claims 18 and 41-43 are allowable. Claims 19-21, 25-27, and 29-40 ultimately depend from Claim 18 and Applicants submit that for at least the reason that each claim ultimately depends from allowable Claim 18, Claims 19-21, 25-27, and 29-40 are also allowable.

**c. Claims 42 and 43**

In addition to including similar features as Claim 18 and being allowable for the same reasons as Claim 18, Claim 42 recites the additional limitation of thinned parts in the area adjacent to the webs, making the diaphragm weaker in the area adjacent the webs. Thinned parts of the diaphragm are not shown in either the Samson and Zelson references.

In addition to including similar features as Claim 18 and being allowable for the same reasons as Claim 18, Claim 43 recites that the valve body is a unitary part, comprising a jacket and a diaphragm. This jacket allows the attachment to the valve seat.

In Samson, as previously discussed, the diaphragm is clamped between two parts of the valve seat. The diaphragm and valve seat do not comprise a unitary part.

In Zelson, also as previously discussed, the diaphragm is separate and is placed within a groove, and there is no jacket.

For at least the reasons noted above, Applicants submit that there can be no *prima facie* obviousness in view of Samson and Zelson. Applicants thus submit that Claims 42-43 are allowable for at least these reasons, in addition to the reason that they recite similar features as allowable Claim 18.

## **VI. Conclusion**

For these reasons, Applicants respectfully request favorable reconsideration and allowance of all the pending claims. Should the Examiner wish to discuss this case with the undersigned, the Examiner is invited to call the undersigned at (312) 913-3347.

Respectfully submitted,

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Date: November 1, 2010

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